



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,146	08/31/2001	Christopher M. Wolfe	MNRES-001XX	1601

26869 7590 12/23/2003

DEVINE, MILLIMET & BRANCH, P.A.  
111 AMHERST STREET  
BOX 719  
MANCHESTER, NH 03105

EXAMINER

ORTIZ, ANGELA Y

ART UNIT	PAPER NUMBER
----------	--------------

1732

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/945,146

Applicant(s)

WOLFE ET AL.

Examiner

Angela Ortiz

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1732

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of claims 22-33 in Paper No. 6 is acknowledged.

Claims 1-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The title should be restricted to the elected invention.

### ***Claim Rejections - 35 USC § 112***

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 recites the limitation "said retainer sheet" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22, 24, 25, 29, 30, 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Asada et al., USP 4,395,817.

The cited reference teaches the claimed process of making a keypad structure wherein a film is provided with perforations, and positioned within a switch key-shaped mold cavity such that a resin inlet directs resin through the perforation of the film, and injection molding plastic resin within the mold cavity to form a switch key integral with the film. The detailed method steps include providing specially designed mold blocks that consist of a first block and a second block and placing a plastic sheet having through-holes between the blocks. The first mold block is shaped for forming keys and the second mold block for forming spacers. The mold is also provided with injection gates connected to the cavities via the through holes of the plastic sheet. A thermoplastic polyester ABS resin is injection molded within the cavity and forms a switch key and spacer bonded to the plastic sheet, such that the plastic material flows through and around the holes in the plastic sheet. See col. 2, lines 10-25, 60-68; col. 3, lines 1-40.

Art Unit: 1732

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23, 26, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada et al., USP 4,395,817 in view of Nakajo, USP 6,660,200.

The cited primary reference substantially teaches the basic claimed process of making a keypad structure wherein a film is provided with perforations, and positioned within a switch key-shaped mold cavity such that a resin inlet directs resin through the perforation of the film, and injection molding plastic resin within the mold cavity to form a switch key integral with the film. The detailed method steps include providing specially designed mold blocks that consist of a first block and a second block and placing a plastic sheet having through-holes between the blocks. The first mold block is shaped

Art Unit: 1732

for forming keys and the second mold block for forming spacers. The mold is also provided with injection gates connected to the cavities via the through holes of the plastic sheet. A thermoplastic polyester ABS resin is injection molded within the cavity and forms a switch key and spacer bonded to the plastic sheet, such that the plastic material flows through and around the holes in the plastic sheet. See col. 2, lines 10-25, 60-68; col. 3, lines 1-40.

The cited primary reference does not teach the claimed retainer sheet, or the claimed cutting step.

The added reference teaches a method for manufacturing a sheet shaped key top wherein a plastic sheet is shaped to form an outline of a key top, which is readable on the claimed retainer sheet, and including providing a hole at an additional location for forming a core, which is readable on the instant claimed anchor. A plastic resin is injection molded onto the sheet and fills the outlined key top cavity, as well as flows through the hole formed at another location for forming a core section. See col. 4, lines 11-35.

It would have been obvious to one of ordinary skill in the art at the time the invention was made shape the plastic sheet in the form of an outline as shown in the added reference, when performing the process set forth in the primary reference for forming a key top surface covered with the plastic sheet. With respect to the cutting step, note that the primary reference teaches punching the sheet to form the holes at col. 3, lines 1-6; it would have been obvious to so include cutting as such is equivalent to punching and equivalently achieves the desired perforation.

Claims 27-28, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada et al., USP 4,395,817 in view of Herbst, USP 5,894,006.

The cited primary reference substantially teaches the basic claimed process of making a keypad structure wherein a film is provided with perforations, and positioned within a switch key-shaped mold cavity such that a resin inlet directs resin through the perforation of the film, and injection molding plastic resin within the mold cavity to form a switch key integral with the film. The detailed method steps include providing specially designed mold blocks that consist of a first block and a second block and placing a plastic sheet having through-holes between the blocks. The first mold block is shaped for forming keys and the second mold block for forming spacers. The mold is also provided with injection gates connected to the cavities via the through holes of the plastic sheet. A thermoplastic polyester ABS resin is injection molded within the cavity and forms a switch key and spacer bonded to the plastic sheet, such that the plastic material flows through and around the holes in the plastic sheet. See col. 2, lines 10-25, 60-68; col. 3, lines 1-40.

The cited primary reference does not teach the step of forming a flap in the film and forming a material passage region, and inserting a gate to move the flap.

The added secondary reference teaches as conventional the feature of forming a plastic article having a film-covered surface, wherein a film is provided within a mold cavity and resin is injected into the cavity through the film. The method steps include forming a flap or tongue in the film, providing an injection entry gate at the free end of the flap and injecting resin material into the cavity through the flap. The injecting step

Art Unit: 1732

moves the flap into the mold cavity. Note that the injection technique allows closure of the flap after the cavity is filled to provide a smooth surface. See col. 13, lines 10-50.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flap and inject resin through the flap as shown in the added reference, when performing the process set forth in the primary reference, to provide a smooth surface for the molded key top.

With respect to using a gate as claimed, such would have been obvious for movement of the flap and is an equivalent alternative to the injection pressure of the resin to allow entry of the resin into the covered cavity.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP's 4202091; 4464326; 4729679; 4830809; 5280146; 5989480; 6103346; 6264869; 6573463; 635210.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela Ortiz whose telephone number is 703-308-4446. The examiner can normally be reached on Monday-Thursday 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 703-305-5493. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



Art Unit: 1732

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Angela Ortiz  
Primary Examiner  
Art Unit 1732

ao